

7 In the Final ^{now-final} Rejection, the Examiner alleges that Jinno teaches irradiating the amorphous semiconductor film with an ultraviolet light to crystallize the amorphous semiconductor film into a crystalline semiconductor film and to form an oxide film at a same time.

Applicants could not find any disclosure or suggestion in Jinno that an oxide film is formed at a same time as the irradiation of the amorphous semiconductor film, as recited in the claimed invention. Further, the Office Action does not show where this feature is allegedly shown in the cited reference.

The Examiner also alleges that Jinno teaches providing an impurity element into second portions of the crystalline semiconductor film at a first concentration through the oxide film using the first mask. Though there is no reference in the Office Action to where this alleged teaching is found in the cited reference, Applicants believe that the Examiner is referring to the silicon oxide film taught by Jinno on page 2, paragraph [0012] of the reference. This silicon oxide film, however, is formed on the semiconductor film after the crystallization by the laser. Therefore, it is different from the claimed oxide film since e.g. independent Claim 47 requires that the oxide film is formed at the same time as the crystallization of the amorphous semiconductor film.

Further, Jinno teaches that the (silicon oxide) insulating film is etched to form an implantation stopper 14 by using a photoresist mask. See e.g. page 2, paragraph [0012] in Jinno. As is clear from Fig. 1, an impurity is directly introduced into portions of the semiconductor film without passing through the silicon oxide film.

Accordingly, for at least the above-stated reasons, the rejected claims are not anticipated but rather are patentable over the cited reference. Accordingly, it is respectfully requested that this rejection now be withdrawn.

II. Claim Rejections 35 USC §103

A. Rejection of Claim 48

----- The Examiner also rejects Claim 48 under 35 USC §103 (a) as being unpatentable over Jinno et al. in view of Makita et al. '044. This rejection is also respectfully traversed.

For at least the above-stated reasons for the independent claims, dependent Claim 48 is not disclosed or suggested by Jinno.

In addition, Claim 48 recites that contaminants on a surface of the gate insulating film are reduced by active hydrogen or hydrogen compound before forming the amorphous semiconductor film.

The Examiner admits that Jinno fails to teach this feature and cites Makita for allegedly curing this deficiency in Jinno. Applicants respectfully submit that Makita also fails to teach or suggest this feature.

More specifically, the Examiner asserts that col. 13, lns. 1-9 in Makita is relevant to the claimed feature. However, the film described in Makita for this cited section is an interlayer insulating film 118. See col. 12, ln. 62 in Makita. As is apparent from Fig. 4D in Makita, the interlayer insulating film 118 is formed after forming the basic structure of a TFT, i.e. a semiconductor film, a gate insulating film and a gate electrode while Claim 48 specifically states that the claimed step occurs before forming the amorphous semiconductor film.

Therefore, for at least the above-stated reasons, Claim 48 is not disclosed or suggested by the cited references and is patentable thereover. Accordingly, it is requested that this rejection now be withdrawn.

B. Rejection of Claims 50 and 58

The Examiner also dependent Claims 50 and 58 under 35 USC §103(a) as being unpatentable over Jinno et al. in view of Kim et al. This rejection is also respectfully traversed.

For at least the reasons discussed above for the independent claims, these dependent claims are also patentable over the cited references. Accordingly, it is requested that this rejection now be withdrawn.

C. Rejection of Claims 61, 62, 64-69, 71-76, 78 and 79

The Examiner also rejects Claims 61, 62, 64-69, 71-76, 78 and 79 under 35 USC §103(a) as being unpatentable over Jinno et al. in view of Makita et al. '860. This rejection is also respectfully traversed.

For at least the above-stated reasons, these claims are not disclosed or suggested by Jinno.

The Examiner cites Makita merely for showing RTA, instead of an excimer laser. Therefore, even if the combination of these references was proper (which Applicants do not admit), the combination would still fail to disclose or suggest all of the features of the claimed invention, as explained above.

Therefore, these claims are also patentable over the cited references. Accordingly, it is requested that this rejection now be withdrawn.

D. Rejection of Claims 63, 70 and 77